

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:  
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ALEXANDER, VA 22314

## PCT

### WRITTEN OPINION

(PCT Rule 66)

Applicant's or agent's file reference <b>AUST3001PCT</b>		Date of Mailing (day/month/year) <b>10 NOV 2003</b>
International application No. <b>PCT/US01/44061</b>		REPLY DUE within 1 months/days from the above date of mailing
International filing date (day/month/year) <b>26 November 2001 (26.11.2001)</b>	Priority date (day/month/year)	
International Patent Classification (IPC) or both national classification and IPC <b>IPC(7): C22F 01/12; C22C 11/00 and US Cl.: 148/706, 400; 420/563, 590; 429/225,226</b>		
Applicant <b>INTEGRAN TECHNOLOGIES INC</b>		

1. This written opinion is the first (first, etc.) drawn by this International Preliminary Examining Authority.
2. This opinion contains indications relating to the following items:
  - I ☒ Basis of the opinion
  - II ☐ Priority
  - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
  - IV ☐ Lack of unity of invention
  - V ☒ Reasoned statement under Rule 66.2 (a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
  - VI ☐ Certain documents cited
  - VII ☐ Certain defects in the international application
  - VIII ☐ Certain observations on the international application

3. The applicant is hereby invited to reply to this opinion.

**When?** See the time limit indicated above. ~~The applicant may, before the expiration of that time limit, request this Authority to grant an extension. See rule 66.2(d).~~

**How?** By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

**Also** For an additional opportunity to submit amendments, see Rule 66.4.  
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis.  
For an informal communication with the examiner, see Rule 66.6

**If no reply is filed**, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 26 March 2004 (26.03.2004).

Name and mailing address of the IPEA/US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703)305-3230	Authorized officer Sikyin Ip Telephone No. 703-308-0661
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Jean-Pierre  
Paradis

# WRITTEN OPINION

International application No.

PCT/US01/44061

## I. Basis of the opinion

### 1. With regard to the elements of the international application:\*

- ☐ the international application as originally filed
- ☒ the description:  
 pages 1-4,6-18,22,24-28, and 31, as originally filed  
 pages 5,19,20,21,23,29, and 30, filed with the demand  
 pages NONE, filed with the letter of \_\_\_\_\_
- ☒ the claims:  
 pages NONE, as originally filed  
 pages NONE, as amended (together with any statement) under Article 19  
 pages 33-34d, filed with the demand  
 pages NONE, filed with the letter of \_\_\_\_\_
- ☒ the drawings:  
 pages 1-9, as originally filed  
 pages NONE, filed with the demand  
 pages NONE, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
 pages NONE, as originally filed  
 pages NONE, filed with the demand  
 pages NONE, filed with the letter of \_\_\_\_\_

### 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

### 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the written opinion was drawn on the basis of the sequence listing:

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

### 4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages NONE
- ☐ the claims, Nos. NONE
- ☐ the drawings, sheets/fig NONE

### 5. ☐ This opinion has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed."

**WRITTEN OPINION**

International application No.  
PCT/US01/44061

**V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. STATEMENT**

Novelty (N)	Claims <u>24-25 and 27-30</u>	YES
	Claims <u>1-23,26,31-39</u>	NO
Inventive Step (IS)	Claims <u>NONE</u>	YES
	Claims <u>1-39</u>	NO
Industrial Applicability (IA)	Claims <u>1-39</u>	YES
	Claims <u>NONE</u>	NO

**2. CITATIONS AND EXPLANATIONS**

Claims 1-23, 26, and 31-39 lack an inventive step under PCT Article 33(3) as being obvious over USP 6086691 to Lehockey et al.

Lehockey discloses the Pb based alloy includes Ag, Ca, Sn, Sb, and their mixtures (col. 2, lines 40-44). Said Pb based alloy is formed into electrodes in the form of sheet, plate, mesh etc. (Col. 2, lines 44-45). Electrode mesh is known to be slit and expanded that reads on the claimed perforated (instant claim 39). The electrode material is cold deformed 30%-80% by rolling, pressing, stamping, extruding, drawing, etc (col. 2, lines 52-59). The deformed electrode material is heat treatment in the temperature ranges 180-300°C for 5 to 20 minutes to induce recrystallization (col. 2, lines 60-64). Electrode of Lehockey contains special grain boundary of at least 50% (abstract and col. 2, lines 45-47). Therefore, it would have been obvious to one of ordinary skill in the art to select any portion of range, including the claimed range and steps, from the broader range disclosed in a prior art reference because the prior art reference finds that the prior art composition in the entire disclosed range and steps have a suitable utility.

Claims 24-25 and 27-30 lack an inventive step under PCT Article 33(3) as being obvious over USP 6086691 to Lehockey et al in view of JP 62177868.

The claimed subject matter as is disclosed and rejected above by Lehockey except for the proportions of Pb based electrode alloys. However, JP 62177868 in an abstract discloses the claimed conventional Pb based alloy composition in the same field of endeavor or the analogous metallurgical art. Therefore, it would have been obvious to one having ordinary skill in the art of the cited references at the time the invention was made to provide Lehockey with conventional Pb based alloy proportions as taught by JP 62177868 in order to improve/provide high mechanical strength, oxidation resistance, and long service life.

Claims 1-39 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

NEW CITATIONS

US 6,086,691 A (LEHOCKEY et al) 11 July 2000, see col. 2, lines 40-64.

JP 62177868 A (MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD) 04 August 1987, abstract.

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**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

**TIME LIMIT:**

The time limit set for response to a Written Opinion may not be extended. 37 CFR 1.484(d). Any response received after the expiration of the time limit set in the Written Opinion will not be considered in preparing the International Preliminary Examination Report.